PATTERNS OF SUBSTANCE USE AND SUBSTANCE-RELATED IMPAIRMENT AMONG PARTICIPANTS IN THE AID TO FAMILIES WITH DEPENDENT CHILDREN PROGRAM (AFDC)

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EXECUTIVE SUMMARY

This report provides data on substance use and substance-related impairment among participants in the Aid to Families with Dependent Children (AFDC) program. The study is based on data from the 1991 and 1992 National Household Surveys on Drug Abuse (NHSDA), and was sponsored jointly by the Office of the Assistant Secretary for Planning and Evaluation, the Substance Abuse and Mental Health Services Administration, and the National Institute on Drug Abuse. Estimates from the NHSDA should be regarded as conservative because of potential underreporting of both drug use and program participation.

Another study has examined the prevalence of drug and alcohol use in households participating in AFDC, medicaid, and food stamps.[1] This study expands on that work and examines not only the prevalence of substance use in households participating in AFDC, but importantly further analyzes a combined 1991 and 1992 data set to examine extent of use and impairment related to that use.

Substance abuse issues are generally not part of the eligibility/intake process for AFDC at this time, and usually do not arise even in a family needs assessment process, although they may be suspected. Instead, such issues are more likely to be recognized if a recipient has a high absentee rate in a training program or other activity. In this way it is similar to substance abuse in the work place. A 1992 report of the HHS Office of Inspector General found that only 14 percent of states' AFDC intake forms and 55 percent of JOBS intake assessment forms included questions on substance abuse problems[2]. In addition,

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[1] U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation and the National Institute on Drug Abuse, Patterns of Substance Use and Program Participation, 1994.

[2] U.S. Department of Health and Human Services, Office of Inspector General, Functional Impairments of AFDC Clients, OEI-02-90-00400, 1992.

because denial of the disease is typical in substance abusers, problems may not be easily detected simply through intake questions.

Because proposals for welfare reform would require participating parents to take part in education and job training programs and benefits would be time limited, intervention with substance abusing beneficiaries takes on an importance it has not held previously. Substance abuse is clearly a barrier to self sufficiency for some welfare recipients. In the absence of intervention, at the end of two years beneficiaries with substance abuse problems could be ineligible for the program without the ability to be self supporting.

As family self sufficiency becomes an increasingly important goal within the welfare system, treatment and rehabilitation of substance abusers becomes a focus. The question then arises, how many AFDC recipients might be expected to need such treatment, and for how many would intense treatment needs preclude concurrent participation in education, training and employment activities?

Typically, analyses of substance abuse focus on prevalence and frequency of individuals' use of particular substances. While prevalence rates of drug and alcohol use are important indicators, the questions of greater interest in the context of welfare reform and potential intervention are ones of impairment and need for services. Drug and alcohol use prevalence analyses by themselves do not address the question of the extent to which substance abuse interferes with individuals' ability to work or participate in job training. Such an impairment oriented analysis, however, represents a more complex approach than, for example, an analysis of prevalence of drug use in the past month.

The impairment analysis described in this study was undertaken to answer the more specific question of the extent to which recipients' substance abuse problems might pose a barrier to the employment related objectives of welfare reform. The methodology employed in the impairment analysis represents a new approach to the use of data from the National Household Survey on Drug Abuse. This report represents an attempt to use questions in the

National Household Survey on Drug Abuse about individual functioning and problems associated with substance use and combine them with prevalence data to approach more closely the issue of functional impairment and need for treatment. As part of the impairment analysis a new ratio estimation procedure was used to improve estimates of so-called "hard core" drug use by accounting for the underestimation of these populations in the Household Survey. For comparative purposes, this report also includes prevalence data on the AFDC population from another analysis[3] which focused primarily on past-month and past-year use.

The impairment analysis divides the population into groups according to their patterns of alcohol and other drug use. Those identified as having "significant impairment" include persons identified as dependent on alcohol and drunk at least weekly **OR** as dependent on an illicit drug other than marijuana AND used an illicit drug at least monthly or used heroin at least once in the past year. Those identified as having "some impairment" include individuals identified as not dependent on an illicit drug but used an illicit drug at least **weekly OR** not dependent on alcohol but was drunk at least weekly **OR** dependent on an illicit drug other than marijuana but used an illicit drug less than monthly and did not use heroin **OR** dependent on marijuana **OR** dependent on alcohol but was drunk less than weekly.

The impairment analysis found that[4]:

- Approximately&y percent of female AFDC recipients are estimated to have significant functional impairment related to substance abuse. These

[3] op. cit, U.S. Department of Health and Human Services, Patterns of Substance Use and Program Participation.

[4] It should be noted that preliminary analyses reported on in the press contained slightly different figures from those reported here. The numbers reported here are different for two reasons. First, the earlier analysis used 18 - 64 year olds as the basis for analysis while the current estimates focus on younger individuals, age 18 - 44, in order to be more consistent with the younger age composition of the AFDC population. In addition, the ratio estimation technique used to produce this report's estimates has been refined since the preliminary figures.

individuals' substance abuse problems may be sufficiently debilitating to preclude immediate participation in employment or training activities. When both female and male AFDC recipients are included, the estimated rate of impairment is slightly higher (5.2 percent). It is important to note, however, that the vast majority of individuals identified in this significant impairment category are not AFDC recipients. An estimated 204,600 AFDC recipients and 2,662,600 non-AFDC recipients ages 18-44 were estimated to have this level of impairment. In addition, while we believe that many of these individuals will need intervention prior to other activities, it should be recognized that in the general population many individuals with this level of impairment report being employed.

- An additional 10.6 percent of female AFDC recipients are estimated to be somewhat impaired by substance abuse problems, indicating a likely need for substance abuse treatment concurrent with participation in employment and training activities. When male AFDC recipients are included as well, the rate rises slightly to 11.2 percent.

- AFDC recipients have somewhat higher rates of substance abuse related impairments than persons not receiving AFDC. Because the AFDC population is poorer than the general population, this is not surprising. Persons living in poverty are known to have higher rates of drug and heavy alcohol use than do those with higher incomes, regardless of program participation.

- The vast majority of persons impaired by substance abuse are not AFDC recipients. Just seven percent of all adults (age 18-44) estimated to be significantly impaired by substance abuse report receiving AFDC.

- Because women make up such a large proportion of adults receiving AFDC, a women only comparison is also relevant. Analysis again finds that most

women in the group we have defined as significantly impaired by alcohol and other drug use are not AFDC recipients. Of these women, only 20 percent receive AFDC.

- Impaired AFDC recipients are more likely than other impaired persons to report receiving treatment for their substance abuse in the past year. Half of AFDC recipients estimated to be significantly impaired by substance abuse reported receiving some form of substance abuse treatment in the past year. Only 23 percent of the non-AFDC household adults (age 18 - 44) in this impairment category reported receiving any treatment for their substance abuse problem in the past year.

The study of the basic prevalence of substance use in the AFDC population' found that:

- The prevalence rates of self-reported non-medical drug use are somewhat higher among persons who participate in AFDC than in the general population. In 1991, past-month drug use for persons 15 years of age and older is 10.5 percent for those in AFDC households compared to 6.5 percent in the overall population in that age group. Marijuana is the most frequently reported illicit drug, with nearly 9 percent of individuals in AFDC households reporting past-month use. Past month cocaine use is reported by 1 .O percent of the general population age 15 and older and by 1.6 percent of individuals in AFDC households.

- Three or more episodes of binge drinking in the past month is reported by 8.2 percent of women in AFDC households and 3.8 percent of all women age 15 and older. Among men and women combined, this level of heavy episodic

[5] op. cit. U.S. Department of Health and Human Services, Patterns of Substance Use and Program Participation.

drinking is reported by 8.6 percent of all persons 15 years of age and older and 8.7 percent of those in AFDC households. Binge drinking is defined as having had five or more drinks in a row.

- The vast majority of past month drug users are **not** AFDC recipients. Among the past-month users, 2.7 percent of males and 9.2 percent of females live in households participating in AFDC. In fact, a previous analysis of substance use among parents has shown that more parents who have used illicit drugs in the past month have incomes above 300 percent of the poverty line than have incomes below poverty[6].

The findings of relatively higher rates of reported drug and binge alcohol use among AFDC program participants is not surprising. This program serves persons in poverty, and poor people are at a higher risk for a number of problems including alcohol and drug abuse.

These findings suggest that AFDC program administrators should recognize the presence of persons with substance abuse problems in their caseloads, in order to improve the ability to serve these persons and better focus prevention and treatment efforts.

[6] U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation and the National Institute on Drug Abuse, Substance Abuse Among Women and Parents, July 1994, p. 37.

I. INTRODUCTION

This report presents data on substance use patterns among participants in the Federal assistance program Aid to Families with Dependent Children (AFDC). The sources of the data are the 1991 and 1992 National Household Surveys on Drug Abuse (NHSDA). The analysis was sponsored jointly by the Office of the Assistant Secretary for Planning and Evaluation (ASPE), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Institute on Drug Abuse (NIDA).

Substance abuse is an issue of increasing concern to policy makers because of its enormous consequences for individual users, families, communities, and society. Use of illicit drugs and alcohol has been linked to a variety of problems, such as crime, traffic accidents, homicides, suicides, birth defects, low-birthweight babies, AIDS, family violence, and poor educational performance among youth. The costs of these problems can be staggering; for example, NIDA estimated that the cost for drug-related crime alone was approximately $20 billion in 1983 (NIDA, 1991).

Although substance abuse is not limited to people with low incomes, research has suggested that poverty is a risk factor for the development of drug- and alcohol-related problems (Johnson, 1990-91). Many low-income people participate in Federal assistance programs such as AFDC. Examining the patterns of substance use among AFDC program participants can help to clarify the dimensions of the substance abuse problem in this population and the implications for services for this population.

Another study has examined the prevalence of drug and alcohol use in households participating in AFDC, medicaid, and food stamps.[7] This study expands on that work and

[7] op. cit. U.S. Department of Health and Human Services, Patterns of Substance Use and Program Participation.

examines not only the prevalence of substance use in households participating in AFDC, but importantly further analyzes a combined 1991 and 1992 Household Survey data set to examine the extent of use and impairment related to that use.

Substance abuse issues are generally not part of the eligibility/intake process for AFDC at this time, and usually do not arise even in a family needs assessment process, although they may be suspected. Instead, such issues are more likely to be recognized if a recipient has a high absentee rate in a training program or other activity. In this way it is similar to substance abuse in the work place. A 1992 report of the HHS Office of Inspector General found that only 14 percent of states' AFDC intake forms and 55 percent of JOBS intake assessment forms included questions on substance abuse problems[8]. In addition, because denial of the disease is typical in substance abusers, problems may not be easily detected simply through intake questions.

Because proposals for welfare reform would require participating parents to take part in education and job training programs and benefits would be time limited, intervention with substance abusing beneficiaries takes on an importance it has not held previously. Substance abuse is clearly a barrier to self sufficiency for some welfare recipients. In the absence of intervention, at the end of two years beneficiaries with substance abuse problems could be ineligible for the program without the ability to be self supporting.

As family self sufficiency becomes an increasingly important goal within the welfare system, treatment and rehabilitation of substance abusers becomes a focus. The question then arises, how many AFDC recipients might be expected to need such treatment, and for how many would intense treatment needs preclude concurrent participation in education, training and employment activities?

[8] op. cit. U.S. Department of Health and Human Services, Functional Impairments of AFDC Clients.

Typically, analyses of substance abuse focus on prevalence and frequency of individuals' use of particular substances. While prevalence rates of drug and alcohol use are important indicators, the questions of greater interest in the context of welfare reform and potential intervention are ones of impairment and need for services. Drug and alcohol use prevalence analyses by themselves do not address the question of the extent to which substance abuse interferes with individuals' ability to work or participate in job training. Such an impairment oriented analysis, however, represents a more complex approach than, for example, an analysis of prevalence of drug use in the past month.

The impairment analysis described in this study was undertaken to answer the more specific question of the extent to which recipients' substance abuse problems might pose a barrier to the employment related objectives of welfare reform. This report represents an attempt to use questions in the National Household Survey on Drug Abuse about individual functioning and problems associated with substance use and combine them with prevalence data to approach more closely the issue of functional impairment and need for treatment. For comparative purposes, this report also includes prevalence data on the AFDC population from another analysis' which focused only on past-month and past-year use.

In using this report, readers should be aware that estimates from the NHSDA may be conservative because of potential underreporting both of drug use and of program participation. Some of the differences in prevalence rates highlighted in this report have been subjected to statistical testing to determine their reliability. Since such testing is time consuming, only particular differences of interest were tested. See Appendix 1 for further information on the statistical testing conducted. For differences that have not been tested, the degree of reliability has not been established.

[9] op. cit. U.S. Department of Health and Human Services, Patterns of Substance Use and Program Participation.

The organization of this report is as follows. The next section provides an overview and discussion of the NHSDA. The final section presents the findings from both the prevalence and the impairment analyses.

II. DATA SOURCES, CHARACTERISTICS, AND LIMITATIONS

As indicated in the introduction, the data for this report were taken from the 1991 and 1992 National Household Surveys on Drug Abuse (NHSDA), which are the 11th and 12th in a series of national cross-sectional probability surveys undertaken by the National Institute on Drug Abuse (NIDA) and subsequently the Substance Abuse and Mental Health Services Administration (SAMHSA) to obtain accurate information on levels and patterns of drug and alcohol use and abuse." Relevant to the prevalence and impairment analyses presented in this report, the NHSDA includes questions on AFDC program participation.

Prevalence Analysis

The major indicators of drug-use prevalence reported from the NHSDA data are (1) ever use/lifetime prevalence, (2) past-12-month use/annual prevalence, and (3) past-30-day use/current use. The universe for the NHSDA is the general U.S. household population 12 years of age and older. Alaska and Hawaii were excluded from prior NHSDA surveys but included in the 1991 and 1992 surveys. The 1991 and 1992 NHSDA also provide data from noninstitutional group quarters such as dormitories and homeless shelters.

The 1991 NHSDA has a sample size of approximately 33,000, and the 1992 NHSDA has a sample size of approximately 29,000. The sample was stratified by age to permit oversampling of younger respondents to allow more detailed analysis and to support more precise estimates for these age groups. In addition to young people, the 1991 and 1992 NHSDAs include an oversampling of blacks; Hispanics; and residents of the Chicago, Denver, Los Angeles, Miami, New York, and Washington, D.C., metropolitan areas. The

[10] U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, 1991 National Household Survey on Drug Abuse, Main Findings Report, 1992.

1991 and 1992 surveys also include oversamplings of persons in low-income areas in the urbanized sections of these metropolitan areas.

Homeless persons not in shelters and active military personnel are excluded from the NHSDA universe, but civilians living on military bases are included. The survey also excludes residents of institutions such as long-term hospitals and jails. Residents of noninstitutional group quarters such as dormitories and shelters, however, are included in the 1991 and 1992 NHSDAs. Interpretations of the NHSDA data must take into account these exclusions. Estimates from the survey may be conservative due to these exclusions and possible biasing effects of nonresponse and underreporting. The NHSDA is not a particularly good source of data on abuse of heroin and other serious drug problems because many of the affected individuals are unlikely to be reached in a household survey and because the overall rates of use of these substances is relatively low.

Persons participating in the NHSDA are interviewed in their homes, with parental consent obtained for respondents 12 to 17 years of age. Information on nonmedical drug use is recorded by the respondent on separate, private answer sheets that are placed in an envelope and mailed without being inspected by the enumerator. This and other procedures are used to reduce respondents' inhibitions about reporting drug use.

Drugs specifically covered in the NHSDA include marijuana, including hashish; cocaine, including crack; inhalants; hallucinogens, including PCP; heroin; alcohol; cigarettes and smokeless tobacco; and stimulants, sedatives, tranquilizers, and analgesics (used nonmedically). Data also are tabulated to produce an indication of any illicit drug use, regardless of the specific substance.

The prevalence component of the present report focuses on substance use by persons 15 years of age and older where one or more members of the respondent's family receives benefits through the Federal AFDC program. The following paragraphs outline the methods used to tabulate and analyze the NHSDA prevalence data for this report.

Drug Use Variables. The drug use variables analyzed in this report focused primarily on illicit drug use in the 30-day period prior to the interview and illicit drug use in the 12-month period prior to the interview. Illicit drug use refers to (1) any use of marijuana (including hashish), cocaine (including crack), heroin, hallucinogens, or other illegal drugs; or (2) nonmedical use of psychotherapeutic drugs, including prescription analgesics, tranquilizers, sedatives, and stimulants. Drug variables tabulated in this analysis also include past-30-day (past-month) and past-12-month (past-year) use of marijuana, cocaine, and psychotherapeutic drugs. Additional tabulations of selected alcohol use variables are provided; these include (1) reported weekly consumption of alcohol over the year prior to the interview; (2) reported daily or almost daily consumption of alcohol over the year prior to the interview; and (3) indicators of binge drinking based on the number of days, in the month before the interview, when the respondent consumed five or more alcoholic drinks.

Participation in AFDC Program. This report focuses on persons in families where one or more members received benefits from AFDC. In some cases, information on program participation and benefit levels was provided by someone other than the primary respondent. For these and other income sources and benefit/insurance programs, the survey questionnaire included separate items pertaining to program participation by the respondent and by any other family member(s). Recodes for this analysis examined both sets of items to establish participation by either the respondent or another family member. In addition, the item on AFDC participation collected information on other, unspecified types of welfare. These other types of welfare were not considered in tabulations of AFDC in this report.

Missing data on program participation-related variables existed in the NHSDA data files. When these items were missing, the observations in question were not selected in tabulating data for participants. Thus, estimates of the size of these respective populations may be conservative.

ASPE staff have made preliminary comparisons of the estimates of numbers of program participants from the NHSDA data base and estimates available in the *Overview Of*

Entitlement Programs 1992 Green Book compiled by the House Ways and Means Committee. ASPE found reasonable agreement for AFDC.

Estimation and Precision. The data presented in this report were generated using the "ANALWT" weight variable, which produces estimates based on the full sample (minus specific exclusions as noted). The precision of prevalence estimates presented in this report has been assessed using a computer software package that takes into account complex sample design effects.

For some time NIDA and now SAMHSA have followed a policy of suppressing imprecise (unstable or unreliable) estimates. The suppression is based on a rule regarding the relative standard error (RSE) of estimates. This rule, which applies to rates, proportions, percentages, etc., states that estimates should be suppressed if $RSE[-\ln(P)] > 0.175$ for $P \leq 0.5$ or if $RSE[-\ln(1-P)] > 0.175$ for $P > 0.5$, where P is the proportion. In this report, estimates that fail to meet the applicable criterion of precision are replaced in the tables with the symbol "..." (three periods).

Statistical Difference Testing. As indicated above, selected differences in drug use prevalence rates have been tested to determine their statistical significance. Since such testing is time consuming, only particular differences of interest were tested. The discussion of the findings provides information on the results of the statistical tests, and tables presenting estimates that have been tested are identified in the footnotes. Appendix 1 provides an explanation of the procedures used in conducting these tests and presents the detailed results of each test.

When two prevalence rates are found to be significantly different, it does not necessarily imply that the difference is large or important. What it means is that one can conclude (with a small risk of error), that the two prevalence rates would be found to be different if the survey were replicated with different samples drawn from the same population

using the same procedures. This implies that the differences cannot be attributed solely to sampling error.

It should be noted that most of the comparisons made in the discussion of the findings have not been subjected to statistical testing. For these comparisons, it is not known whether the differences reported could be replicated in repeated sampling.

Impairment Analysis

The impairment analysis in this report reflects a more complex analysis of substance use patterns than presented through a prevalence analysis. The impairment analysis focuses on adults ages 18 - 44. The following is a brief description of the procedure used to produce the estimated numbers in the impairment analysis.

The Diagnostic and Statistical Manual of the American Psychiatric Association (DSM-III-R) specifies nine criteria to determine substance dependence. If a person meets 3 out of the 9 criteria and symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a longer period of time, they are defined as dependent on that substance.

The NHSDA questionnaire includes items that approximate five of the nine DSM-III-R criteria. Appendix 2 contains a chart indicating the nine DSM-III-R criteria and the questions from the NHSDA that are used to approximate five of these criteria. A person is defined as meeting a criteria if they responded yes to the question covering that criteria. If more than one question covers the criteria, they are defined as meeting that criteria if they responded yes to at least one of the questions that cover the criteria. For purposes of this analysis, a person is defined as dependent in this analysis if they answer yes to 2 out of the 5 questions which approximate a subset of criteria defined in the DSM-III-R.

The methodology involves the identification of four impairment groups, as follows:

No Imnairment

All of the following three are present:

1. Not dependent on alcohol or any illicit drug.
2. Did not use an illicit drug in the past year.
3. Did not get drunk in the past year.

Little Impairment

Both of the following are present:

1. Not dependent on alcohol or any illicit drug.
2. Used an illicit drug, but less than weekly in the past year

   OR

   was drunk, but less than weekly in the past year.

Some Imnairment

At least one of the following 4 are present:

1. Not dependent on alcohol or any illicit drug

   AND

   used an illicit drug weekly or more often or

   was drunk weekly or more often.
2. Dependent on an illicit drug other than marijuana,

   AND

   did not use an illicit drug other than marijuana monthly or more often

   AND

   did not use heroin.
3. Dependent on alcohol but was drunk less than weekly.
4. Dependent on marijuana but did not meet the criteria for significant impairment.

Significant Imnairment

Either of the following are present:

1. Dependent on an illicit drug other than marijuana,

AND

used an illicit drug at least monthly or

used heroin at least once in the past year.

2. Dependent on alcohol and was drunk weekly or more often.

A combined file of the 1991 and 1992 NHSDA surveys was used for the impairment analysis on the AFDC population. Before performing the impairment analysis, an estimate of the number of recipients of AFDC was made from the combined file. This estimate was compared with the estimate in the Green Book and found to be consistent.

The number of people in each impairment group was determined using the combined file according to the definitions described previously. A ratio estimation procedure was performed to improve estimates of so called "hard core" drug use. It is recognized that NHSDA estimates of drug abuse prevalence are conservative due to potential undercoverage of heavy drug using populations and underreporting of drug use among survey respondents. While the magnitude of this underestimation is unknown, it is believed to be greater for the most severely affected substance abusers. To attempt to correct for the underestimation of this "hard-core," drug use, the Office of Applied Studies, in the Substance Abuse and Mental Health Services Administration, developed a method, that links NHSDA data with outside sources of data to result in adjusted prevalence estimates. The method is based on a standard estimation technique used in many large surveys, called ratio estimation.

The new method of ratio estimation that the NHSDA employs reduces the underestimation somewhat. Using external data sources (primarily the Uniform Crime Reports and the National Drug and Alcohol Treatment Unit Survey) that are believed to be accurate, population counts are developed for four cells: persons 12 and older who were arrested and received treatment in the past year, persons 12 and older who were arrested and did not receive treatment last year, persons 12 and older who were not arrested and received treatment in the past year, and persons 12 and older who were not arrested and did not receive treatment in the past year. Then estimated counts from the NHSDA sample are

developed for the same four cells. Finally, the ratio of the population count to the sample estimate is computed for each of the four cells. These four ratios, which may be called adjustment factors, are then applied to NHSDA analysis weights for sample cases, according to the particular cell that each sample case belongs to. By multiplying NHSDA weights by these adjustment factors in this way, the result is adjusted weights that should provide improved estimates of hard core drug use.

The implicit assumption in this method is that the magnitude of underestimation of hard core drug use is similar to the magnitude of underestimation of arrest and treatment in the same sample. For example, if the external population count for the number arrested and in treatment in the past year is twice as large as the corresponding sample estimate, then the analysis weights for that cell are multiplied by 2. Since a large proportion of the arrested and treated population is also hard core drug users, the adjustment inflates the overall estimate of hard core drug use. Counts of arrestees and treatment clients are used because we know that a large number of hard core drug users are found in these populations.

Because the ratio estimation involves the use of external counts of treatment and arrest, adjusted estimates of the percent of the population treated or arrested turn out to be substantially different (i.e., larger) than unadjusted estimates.

There are limitations to using the ratio estimation procedure. The factors that are used to adjust the sample estimates are derived for the total civilian nonstitutionalized population 12 years of age and older. While theoretically it is possible to determine adjustment factors for specific subpopulations, data are not currently available to do this. Thus, applying the method to subpopulations with the current four-cell adjustment factors basically assumes these factors are the same for the subpopulations as for the total population. To the degree that these factors differ for the subpopulations (e.g., AFDC population age 18-44), the adjusted estimates will be biased. For a population as large as the AFDC population age 18-44, it is likely that the adjusted estimate is less biased that the unadjusted estimate.

The ratio adjustment does not significantly affect the estimated total number of persons on AFDC, so this total remains consistent with the estimate in the Green Book. Detailed descriptions of the dependence approximation method and the ratio estimation procedure are found in other papers (see references).

III. FINDINGS

Overview of Substance Use Patterns and AFDC Participation

In 1991, over 12.5 million persons 15 years of age and older" report past-month illicit use of drugs[12], and 25 million report past-year use, as shown in Table 1A. Overall, the proportion of all reported past-month users who participate in AFDC is relatively small, 5.4 percent. This translates into approximately 677,000 self-reported past-month drug users in AFDC households.[13] Among the past-month users, 2.7 percent of males and 9.2 percent of females live in households participating in AFDC (calculated from figures in Table 1A, 1B, and 1C). In fact, a previous analysis of substance abuse among parents has shown that more parents who have used illicit drugs in the past month have incomes above 300 percent of the poverty line than have incomes below poverty[14].

Viewing the data differently, the prevalence rates of self-reported drug use are higher among persons who participate in AFDC than among persons overall. Based on statistical testing these differences are highly significant for females and for both sexes together

[11] Publications based on the National Household Survey of Drug (NHSDA) provide estimates for the household population 12 years of age and older, taking into account the entire survey sample. By focusing on the population 15 years of age and older, and in some cases 18 years of age or older, this report is considering a somewhat more adult population. Because of this difference, the estimates in this report differ from those in NHSDA publications.

[12] The any-illicit-drug use category includes any use of marijuana, cocaine, heroin, hallucinogens or inhalants and nonmedical use of psychotherapeutic drugs.

[13] For ease of presentation, households in which one or more members (the respondent or another family member) receive AFDC are referred to as "AFDC households."

[14] op. cit. U.S. Department of Health and Human Services, Substance Abuse Among Women and Parents.

($p < 0.001$). The rate of self-reported past-month illicit drug use among females is 10.8 percent among those reporting AFDC participation, while the rate for all females is 5.2 percent. For both sexes together, 10.5 percent of all persons participating in AFDC report past-month drug use, while the rate of past-month drug use for all persons is 6.5 percent. The pattern of rates for males also shows that drug use prevalence tends to be higher among those in households participating in AFDC than among males overall. The small number of males in households receiving AFDC may have reduced the likelihood of finding statistical significance in the comparisons of this group.

Table 1A also presents information on patterns of self-reported alcohol and selected drug use among persons 15 years of age and older and by AFDC participation. Tables 1B and 1C provide this information by sex. Weekly use of alcohol over the past year was reported by 22 percent of all persons and 19 percent of those in AFDC households. Daily or almost daily use of alcohol over the past year was reported by 9.8 of all persons and 7.1 percent of those in AFDC households. The NHSDA also provides data on binge, or heavy episodic, drinking, defined as the consumption of five or more drinks on an occasion. Three or more episodes of binge drinking in the past month, a measure of heavy alcohol use, is reported by 8.6 percent of all persons 15 years of age and older, and 8.7 percent of those in AFDC households. However, different patterns emerge when analyzed by sex (Tables 1B and 1 C). Among males, binge drinking on three or more occasions in the past month is reported by 9.6 percent of those living in AFDC households, and 13.8 percent of all males. Among females, this level of heavy episodic drinking is reported by 8.2 percent of those in AFDC households, and 3.8 percent of all females.

Table 1A shows a higher prevalence rate for the self-reported use of marijuana than for other drugs. The past-year rate of marijuana use is 9.8 percent for all persons 15 years of age and older, and 16.7 for those in households receiving AFDC. For past-month use, the corresponding prevalence rates are 5.0 percent overall, and 8.7 percent for AFDC recipients. Statistical tests have been run to evaluate the differences in prevalence rates for persons of both sexes together for daily or almost daily marijuana use in the past year.

Table 1A

Prevalence of drug and alcohol use by persons 15 years of age and older Total persons and by AFDC program participation: 1991

(BOTH SEXES)

Alcohol and Drug Use Pattern	Total persons in category		AFDC	
	Number	Rate	Number	Rate
BOTH SEXES				
Alcohol				
Weekly or almost weekly for past year	42,769,370	22.2	1,196,488	18.6
Daily or almost daily for past Year	18,942,884	9.8	457,738	7.1
Fiie or more drinks one or more times in past 30 days	30,160,709	15.6	882,293	13.7
Five or more drinks three or more times in past 30 days	16,535,390	8.6	558,261	8.7
Any illicit drug use				
Past year	25,000,010	13.0	1,391,304	21.6
Past month	12,505,666	6.5	677,539	10.5
Marijuana				
Past year	18,901,175	9.8	1,073,203	16.7
Past month	9,617,944	5.0	560,320	8.7
Weekly for past year	5,059,493	2.6	350,220	5.4
Daily or almost daily for past year	2,859,751	1.5	199,590	3.1
Cocaine				
Past year	6,013,627	3.1	411,773	6.4
Past month	1,875,438	1.0	104,667	1.6
Weekly for past year	623,396	0.3	62,877	1.0
Total persons in population	192,878,836	100.0	6,434,359	100.0

NOTE: The 'any illicit drug' category includes any nonmedcal use of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP), heroin, or psychotherapeutic drugs. Numbers and percentages may not sum to totals because of rounding. Past-year use includes use in the past month. Program participation is counted if any member of the family received benefits. Selected comparisons of drug use rates in this table have been subjected to statistical difference testing; the results of these tests are shown in the appendix.

SOURCE: NIDA, 1991 National Household Survey on Drug Abuse

Table 1 B

Prevalence of drug and alcohol use by persons 15 years of age and older
Total persons and by AFDC program participation: 1991
(FEMALES ONLY)

Alcohol and Drug Use Pattern	Total persons in category		AFDC	
	Number	Rate	Number	Rate
FEMALES ONLY				
Alcohol				
Weekly or almost weekly for past year	14,290,401	14.2	662,701	14.8
Daily or almost daily for past year	5,517,397	5.5	296,565	6.6
Five or more drinks one or more times in past 30 days	8,217,084	8.2	558,849	12.5
Five or more drinks three or more times in past 30 days	3,834,926	3.8	368,579	8.2
Any illicit drug use				
Past year	11,098,258	11.0	943,893	21.1
Past month	5,275,629	5.2	482,820	10.8
Marijuana				
Past year	7,593,606	7.5	721,971	16.2
Past month	3,529,467	3.5	385,211	8.6
Weekly for past year	1,491,354	1.5	232,931	5.2
Daily or almost daily for past year	822,250	0.8	134,303	3.0
Cocaine				
Past year	2,095,005	2.1	243,895	5.5
Past month	616,075	0.6	76,595	1.7
Weekly for past year	275,030	0.3	45,928	1.0
Total females in population	100,619,957	100.0	4,468,498	100.0

NOTE: The **"any illicit drug' category includes any nonmedcal use of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including** PCP), heroin, or psychotherapeutic drugs. Numbers **and percentages may not sum to totals because of rounding. Past-year use includes use in the past** month. Program participation is counted if **any** member of the family received **benefits. Selected comparisons of drug use rates in this table have been subjected to statistical difference testing; the results of these tests are shown in the appendix.**

SOURCE: NIDA, 1991 National Household Survey on Drug Abuse

Table 1C
Prevalence of drug and alcohol use by persons 15 years of age and older
Total persons and by AFDC program participation: 1991
(MALES ONLY)

Alcohol and Drug Use Pattern	Total persons in category		AFDC	
	Number	Rate	Number	Rate
MALES ONLY				
Alcohol				
Weekly or almost weekly for past year	28,478,969	30.9	533,787	27.2
Daily or almost daily for past year	13,425,488	14.6	161,173	8.2
Fiie or more drinks one or more times in past 30 days	21,943,625	23.8	323,444	16.5
Fiie or more drinks three or more times in past 30 days	12,700,464	13.8	189,683	9.6
Any illicit drug use				
Past year	13,901,751	15.1	447,410	22.8
Past month	7,230,037	7.8	194,719	9.9
Marijuana				
Past year	11,307,569	12.3	351,232	17.9
Past month	6,088,476	6.6	175,109	6.9
Weekly for past year	3,568,139	3.9	117,289	6.0
Daily or almost daily for past year	2,037,501	2.2	65,287	3.3
Cocaine				
Past year	3,918,621	4.2	...	...
Past month	1,259,363	1.4	28,072	1.4
weekly for past year	348,365	0.4	16,949	0.9
Total males in population	92,258,879	100.0	1,965,862	100.0

... Low precision; no estimate reported.

NOTE: The 'any illicit drug' category includes any nonmedcal use of marijuana or hashish, cocaine (including crack), inhalants, hallucinogens (including PCP), heroin, or psychotherapeutic drugs. Numbers arid percentages may not *sum to* totals because of rounding. Past-year use includes use in the past month. Program participation is counted if any member of the family received benefits. Selected comparisons of drug use rates in this table have been subjected to statistical difference testing; the results of these tests are shown in the appendix.

SOURCE: NIDA, 1991 National Household Survey on Drug Abuse

Compared to the rate of 1.5 percent among all persons 15 years of age and older, statistically significant differences were found for the rate for persons in households receiving AFDC (rate of 3.1 percent, $p < 0.01$). See Appendix 1 for further information on the results of statistical tests of differences in prevalence rates.

Although the proportion of persons reporting cocaine use is small, the rates among persons 15 years of age and older of both sexes, with few exceptions, are higher among those in households receiving AFDC than in the total population. For past-year cocaine use, for example, the rate in the total population is 3.1 percent. In contrast to this, the rate for persons in AFDC households is 6.4 percent ($p < 0.05$). See Appendix 1 for further information on significance test results involving rates of cocaine use.

Overview of Substance Abuse Impairment and AFDC Participation

While prevalence rates of drug use are important indicators, the question of greater interest when focusing on interventions is the question of impairment and need for services. Such an impairment oriented analysis, however, represents a more complex approach than, for example, an analysis of prevalence of drug use in the past month. Chapter II describes in general the methodology used for the impairment analysis, the results of which appear in Tables 2A[15] (AFDC adults age 18 - 44) and 2B (non-AFDC adults age 18 - 44). Because the AFDC adult population is predominantly female, additional data reflecting the female AFDC and non-AFDC population are included in Tables 3A and 3B.

[15] It should be noted that preliminary analyses reported on in the press contained slightly different figures from those reported here. The numbers reported here are different for two reasons. First, the earlier analysis used 18 - 64 year olds as the basis for analysis while the current estimates focus on younger individuals, age 18 - 44, in order to be more consistent with the younger age composition of the AFDC population. In addition, the ratio estimation technique used to produce this report's estimates has been refined since the preliminary figures.

Table 2A
Number of Adults (18-44) Receiving AFDC by Impairment Group and by Treatment

Impairment Group	Percent	Number of Adults	Number Who Received Substance Abuse Treatment in Past Year
No impairment	63.0	2,493,800	45,700
Little impairment	20.7	817,600	42,890
Some impairment	11.2	441,400	83,306
Significant impairment	5.2	204,600	102,490
TOTAL	100.1	3,957,400	274,200

See notes on the following page.
Due to rounding, percentages may not add to 100.

Table 2B
Number of Adults (18-44) NOT Receiving AFDC by Impairment Group and by Treatment

Impairment Group	Percent	Number of Adults	Number Who Received Substance Abuse Treatment in Past Year
No impairment	62.8	65,152,700	909,600
Little impairment	25.6	26,599,600	547,390
Some impairment	9.0	9339,500	701,000
Significant impairment	2.6	2,662,600	620,700
TOTAL	100.0	103,754,000	2,839,100

See notes on the following page.
Due to rounding, percentages may not add to 100.

NOTES ON TABLES 2A, 2B, 3A and 3B:

Treatment = treatment for alcohol or drug abuse in a hospital (including emergency room), by a private doctor, a drug or alcohol rehabilitation center, mental health clinic or a self help group.

No impairment = All of the following are present:
1. Not dependent on alcohol or any illicit drug.
2. Did not use an illicit drug in the past year.
3. Did not get drunk in the past year.

Liile Impairment = Both of the following are present:
1. Not dependent on alcohol or any illicit drug.
2. Used an illicit drug, but less than weekly in the past year
   OR
   was drunk, but less than weekly in the past year.

Some Impairment = At least one of the following 4 are present.
1. Not dependent on alcohol or any illicit drug
   AND
   used an illicit drug weekly or more often or
   was drunk weekly or more often.
2. Dependent on an illicit drug other than marijuana,
   AND
   did not use an illicit drug other than marijuana monthly or more often
   AND
   did not use heroin.
3. Dependent on alcohol but was drunk less than weekly.
4. Dependent on marijuana and not meeting the criteria for maximum impairment.

Significant Impairment = Either of the following are present.
1. Dependent on an illicit drug other than marijuana,
   AND
   used an illicit drug at least monthly or
   used heroin at least once in the past year.
2. Dependent on alcohol and was drunk weekly or more often.

SOURCE OF DATA: Special tablulations from 1991/1992 National Household Survey on Drug Abuse by the Office of Applied Studies, SAMHSA.

Table 3A
Number of Females (18-44) Receiving AFDC by Impairment Group and by Treatment

Impairment Group	Percent	Number of Adults	Number Who Received Substance Abuse Treatment in Past Year
No impairment	64.0	2,187,100	13,800
Little impairment	20.5	700,306	30,100
Some impairment	10.6	363,300	53,000
Significant impairment	4.9	167,600	93,000
TOTAL	100.0	3,418,300	189,900

See notes on the previous page.
Due to rounding, percentages may not add to 100.

Table 3B
Number of Females (18-44) NOT Receiving AFDC by Impairment Group and by Treatment

impairment Group	Percent	Number of Adults	Number Who Received Substance Abuse Treatment in Past Year
No impairment	71.7	36,066,300	327,900
Little impairment	20.9	10,51 1,400	82,900
Some impairment	6.0	3,036,300	187,000
Significant impairment	1.3	671,800	180,200
TOTAL	99.9	50,285,800	778,000

See notes on the previous page.
Due to rounding, percentages may not add to 100.

For purposes of the analysis, four impairment groups were identified, as defined in Chapter II. Estimates of the number of persons who received any substance abuse treatment in the year prior to the interview were estimated for each of the impairment groups. Treatment could have been at any of the following: a hospital (including emergency room), a private doctor, a drug or alcohol treatment or rehabilitation center, a mental health clinic, or a self help group. The estimated number of persons receiving treatment are given in the right-most column of Tables 2A, 2B, 3A and 3B.

As shown in Table 2B, an estimated 2.6 percent of non-AFDC household adults (ages 18 - 44) and 5.2 percent of adults in AFDC households (Table 2A) are identified as being in the significant impairment category, defined as dependent on alcohol and drunk at least weekly **OR** dependent on an illicit drug other than marijuana and used an illicit drug at least monthly or used heroin at least once in the past year. This higher rate of impairment among AFDC recipients is consistent with the earlier findings on prevalence. **It** is important to note, however, that the vast majority (93 percent) of individuals identified in this significant impairment category are not AFDC recipients. An estimated 204,600 AFDC recipients (Table 2A) and 2,662,600 non-AFDC recipients (Table 2B) were identified as having this level of impairment.

It is believed that those AFDC recipients in the significant impairment category are likely to have substance abuse problems sufficiently debilitating to preclude immediate participation in employment or training activities. While we believe that many of these individuals will need intervention prior to other activities, it should be recognized that in the general population many individuals with this level of impairment report being employed.

An additional estimated 9.0 percent of non-AFDC household adults (Table 2B) and 11.2 percent of AFDC recipients (Table 2A) are identified as being somewhat impaired by substance abuse, defined as not dependent on an illicit drug but used an illicit drug at least weekly **OR** not dependent on alcohol but was drunk at least weekly **OR** dependent on an illicit drug other than marijuana but used an illicit drug other than marijuana less than

monthly and did not use heroin **OR** dependent on marijuana **OR** dependent on alcohol but was drunk less than weekly. Again, the vast majority of individuals in this impairment category are not in AFDC households.

An estimated 441,400 AFDC recipients and 9,339,500 non-AFDC recipients are identified as being somewhat impaired by substance abuse. It is believed that those AFDC recipients in this category are likely to need substance abuse treatment concurrent with participation in employment and training activities.

Also as shown in Tables 2A and 2B, 23 percent of the 2.6 percent of non-AFDC household adults (age 18 - 44) and 50 percent of the 5.2 percent of AFDC adults identified as experiencing the most impairment report receiving some form of substance abuse treatment in the past year.

Because the AFDC population is predominantly female, it may be more appropriate to compare impairment rates among women only rather than using the entire adult population as the comparison group. As shown in Tables 3A and 3B, an estimated 1.3 percent of females age 18 - 44 in non-AFDC households and 4.9 percent of females 18 - 44 in AFDC households are identified as being in the significant impairment category. It should be noted that most women in the group we have defined as significantly impaired by alcohol and other drug use are not AFDC recipients. Of these women, only 20 percent receive AFDC.

An additional 6.0 percent of non-AFDC females and 10.6 percent of females receiving AFDC are somewhat impaired by substance use. Nearly 27 percent of the significantly impaired non-AFDC females and 55 percent of the significantly impaired women on AFDC have received some form of substance abuse treatment in the past year.

In comparison to the prevalence analysis in Tables **1 A,** 1B, and 1 C, the impairment analysis shown in Tables 2A, 2B, 3A and 3B illustrates that prevalence rates, while

providing some indication of service need, can be refined to develop more adequate measures.

Summary

The findings of relatively higher rates of reported drug use and subsequent impairment among AFDC program participants is not surprising. This program serves persons in poverty, and poor people are at a higher risk for a number of problems including drug use.

The findings suggest that the AFDC program should recognize the presence of persons with substance abuse problems in the caseload, in order to improve the ability to serve these persons and to focus substance abuse prevention and treatment efforts.

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APPENDIX 1

RESULTS OF STATISTICAL TESTING OF SELECTED DIFFERENCES

As mentioned in the introduction, selected differences in estimated rates of drug use in different population subgroups presented in this report have been tested to determine their statistical significance. This appendix presents the results of the statistical tests, which involve selected contrasts of rates presented in tables 1, and 2.

For each selected comparison, this appendix shows the variable tested; the subgroups over which the contrast was tested; the domain involved; the estimated rate of drug use in each subgroup (expressed as percentages); the standard error (SE) of the rate in each subgroup (expressed as percentages); the difference between the rates in the two subgroups (expressed as a percentage); the correlation coefficient for the two rates; the SE of the difference between the two rates (expressed as a percentage); the Z-value based on the difference and the SE of the difference; the probability associated with that Z-value, assuming a normal distribution; and asterisks identifying statistically significant differences and giving the level of significance (0.05, 0.01, or 0.001).

The complex design of the NHSDA sample requires special methods of calculating SEs of estimates and of differences between estimates. The SESUDAAN software package, which was used to determine the SEs and precision levels of all estimates published in this report, also was used to determine the SEs of the differences between the estimated drug use rates observed among different population subgroups. SESUDAAN provides a direct means of obtaining the SE of the differences for contrasts involving estimates for mutually-exclusive subgroups in a given domain.

The likelihood of a type I error (wrongly rejecting the null hypothesis, i.e., erroneously concluding that two estimated rates are different when they are not) for individual contrasts is the probability level or significance level shown in the tabulations in this appendix. However, the overall error rate for a group of comparisons increases as the number of comparisons increases. One way to reduce the overall error rate is to reduce the criterion significance level (alpha level or probability of a type I error) applied to each comparison in the set.

A separate problem in performing the statistical tests was that many of the comparisons discussed in the report involve differences between the rate for a subgroup of a population and the rate for the population that includes that subgroup (e.g., females 15 years of age and older in households receiving AFDC versus all females in this age range, as shown in table 1). SESUDAAN, the SE calculation software used because of the complex sample design, does not provide a means of handling comparisons of this type. For these cases, statisticians at the National Institute on Drug Abuse developed an algorithm involving calculations performed after obtaining the SESUDAAN estimates of the SE of the difference between categories that are mutually exclusive and exhaustive of the domain. Let N_a be the estimated number of females 15 years of age and older overall; X_a be the estimated number of drug-using females in this overall population; and $P_a = X,/N,,$ the proportion of drug users among females in the target age range. By separating the population of females into those in households receiving AFDC and those not in such households (two mutually exclusive and exhaustive categories) and manipulating the component terms, the following paradigm and argument emerge:

	All females 15 years of age and older	Females in age range in AFDC households	Females in age range not in AFDC households
Number in population	N_a	N_1	N_2
Number of drug users	X_a	X_1	X_2
Proportion of drug users	$P_a = X_a/N_a$	$P_1 = X,/N,$	$P_2 = X,/N,$

Thus,

$$N_a = N_1 + N_2$$

$$X_a = X_1 + X_2$$

and

$$P_a = X,/N,, = (X,+X,)/N, = (N_1/N_a * P,) + (N_2/N_a * P_2)$$

The contrast of interest is P_a-P_1. As shown below, P_a-P_1 can be expressed in terms of P_2-P_1, N_a and N,.

$$P_a - P_1 = [N_1/N_a * P,] + [N2/N_a * P_2] - P_1$$

$$= [N_2/N_a * P_2] + P_1 * [N_1/N_a - N_a/N_a]$$

$$= [N_2/N_a * P,] + P_1 * [-N_2/N_a]$$

$$= N_2/N_a * [P_2 - P_1]$$

Thus,

$$Var(P_a - P,) = Var[N_2/N_a * (P_2 - P,)$$

$$= [N_2/N_a]^2 Var(P_2 - P_1)$$

and

$$SE(P_a - P_1) = [N_2/N_a]SE[P_2 - P,]$$

The SE of P_2-P_1 is available from SESUDAAN. Elaborating on the example above by considering past-year use of any illicit drug by females in households receiving AFDC (table 1), the SE of P_2-P_1 is obtained by requesting the contrast for females in households receiving AFDC versus those not in such households. In this example, this SE is .0112. The quantity N_2/N_a, which is regarded as a constant in the last step above, is the complement of the proportion of the population in the subgroup of interest. In our example from table 1, N_a, the total number of females, has the value 100,619,957; N,, the number of women in households receiving AFDC, is 4,468,498; and $N_2 = N_a$-N_1 = 96,151,459 women. Thus, N_2/N_a = 0.956. This quantity is estimated from the sample and has some sampling variability. However, the SE is small (.003 in absolute terms or a relative standard error [RSE] equal to 0.3 percent of the value of the estimate). The RSEs for all N_2/N_a values used in the equation were less than 1 percent, which suggests that regarding N_2/N_a as a constant would not introduce a notable bias in the estimate of the SE of the difference. By comparison, in the same set of contrasts, the minimum RSE of P_2-P_1 was 15.9 percent. No independent estimates of N_2/N_a, or its complement, N_1/N_a, are available because the definitions used in the NHSDA (e.g., women in households in which one or more residents received AFDC in the past year) are not precisely comparable to those used in other surveys. Proceeding with the calculations in the example, the SE of P_a-$P_1 = N_2/N_a$ times the SE of P_2-P_1 = 0.956 times .0112 = .0107. The value for the SE of P_a-P_1 cited in the appendix table is expressed as a percentage, 1.07 for females.

As indicated above, the tabulations in this appendix include the correlation coefficient for each contrast. The correlations generally are higher for women than for men or all persons in the target age range. This pattern may reflect the fact that more adult females than adult males live in households receiving AFDC.

Table 4

Pairwise tests of significance of differences in substance use prevalence rates for specific comparisons

Variable	Contrast (Pl vs Pa)	Domain	P1	SE1	Pa	SEa	Dii (Pa-Pl)	Corre-lation	SE of diff.	z-value	Prob.	
SUMMON	AFDC vs Total	Both Sexes	10.53	0.95	6.50	0.26	4.03	0.10	0.96	4.18	0.0000	***
SUMMON	AFDC vs Total	Males	9.91	1.92	7.60	0.44	2.11	0.00	1.97	1.07	0.2660	***
SUMMON	AFDC vs Total	Females	10.80	1.10	5.20	0.28	5.60	0.23	1.07	5.22	0.0000	***
SUMYR	AFDC vs Total	Both Sexes	21.62	1.60	13.00	0.38	8.62	(0.03)	1.85	4.65	0.0000	***
SUMYR	AFDC vs Total	Males	22.76	4.76	15.10	0.61	7.66	0.01	4.79	1.60	0.1095	***
SUMYR	AFDC vs Total	Females	21.12	1.61	11.00	0.42	10.12	0.15	1.60	6.33	0.0000	***
BINGE3	AFDC vs Total	Both Sexes	8.68	1.32	8.60	0.29	0.08	0.21	1.29	0.06	0.9529	
MRJDLYF	AFDC vs Total	Both Sexes	3.10	0.60	1.50	0.10	1.60	0.18	0.59	2.71	0.0068	**
COCMON	AFDC vs Total	Both Sexes	1.63	0.43	1.00	0.10	0.63	0.41	0.40	1.58	0.1145	
COCYR	AFDC vs Total	Both Sexes	6.40	1.33	3.10	0.18	3.30	0.23	1.30	2.53	0.0113	*
COCWKF	AFDC vs Total	Both Sexes	0.98	0.29	0.30	0.04	0.68	0.07	0.29	2.32	0.0202	•

SUMMON is use of any illicit drug in the past month; SUMYR is use of any illicit drug in the past year; BINGE3 is consumption of 5 or more drinks of alcohol on at least 3 days in the past month; MRJDLYF is use of marijuana daily or almost daily over the past year; COCMON is use of cocaine in the past month; COCYR is use of cocaine in the past year; and COCWKF is use of cocaine approximately weekly or more frequently over the past year.

NOTE: P=rate and SE=standard error. P1 and Pa are the prevalence rates (in percentages) for the first and second categories in the comparison, respectively. SE1 and SEa are the standard errors (in percentages) for P1 and Pa, respectively. Total (in contrasts) refers to persons in domain.
*=p<.05; **=p<.01; ***=p<.001

SOURCE: NIDA, 1991 National Household Survey on Drug Abuse

APPENDIX 2

DMS-III-R Criteria for Substance Dependence and Corresponding Questions in the NHSDA That Represent Them

DSM-III-R Criteria	Questions in NHSDA Used To Cover DMS-III-R Criteria
1. Substance often taken in larger amounts over a longer period than the person intended.	
2. Persistent desire or one or more unsuccessful efforts to cut down or control substance use.	DR-2: During the past 12 months, for which drugs have you been unable to cut down on your use, even though you tried?
3. A great deal of time spent in activities necessary to get the substance, or recover from its effects.	
4. Frequent intoxication or withdrawal symptoms when expected to fulfill major obligations at work, school, or home, or when substance use is physically hazardous.	
5. Important social, occupational, or recreational activities given up or reduced because of substance abuse.	DP-lh: As a result of your drug use at any time in your life, did you in the past 12 months get less work done than usual at school or on the job?
6. Continued substance use despite knowledge of having a persis- tent or recurrent social, psychological, or physical problem that is caused or exacerbated by use of the substance (e.g., keeps using heroin despite family arguments about it, cocaine-induced depression, or having a ulcer made worse by drinking).	DP-1: At least one of the following AND currently used a drug in the past month: As a result of your drug use at any time in your life, did you in the past 12 months.. . **DP-la:** Become depressed or lose interest in things from your use of any of the substances listed on the card? **DP-lb:** Have arguments and fights with family or friend? **DP-lc:** Feel completely alone and isolated? **DP-ld:** Feel very nervous and anxious? **DP-le:** Have health problems from your use of any of the substances listed on the card? **DP-lf:** Find it difficult to think clearly? **DP-lg:** Feel irritable and upset?
7. Marked tolerance: need for markedly increased amounts of the substance (i.e., at least 50 percent increase) in order to achieve intoxication or desired effect, or markedly diminished effect with continued use of the same amount.	DR-3: During the past 12 months, for which drugs have you needed larger amounts to get the same effect; that is, for which drugs could you no longer get high on the same amount you used to use?
8. Characteristic withdrawal symptoms.	DR-6: For which drugs have you had withdrawal symptoms; that is, you felt sick because you stopped or cut down on your use of them during the past 12 months?
9. Substance often taken to relieve or avoid withdrawal symptoms.	